

FIG.1

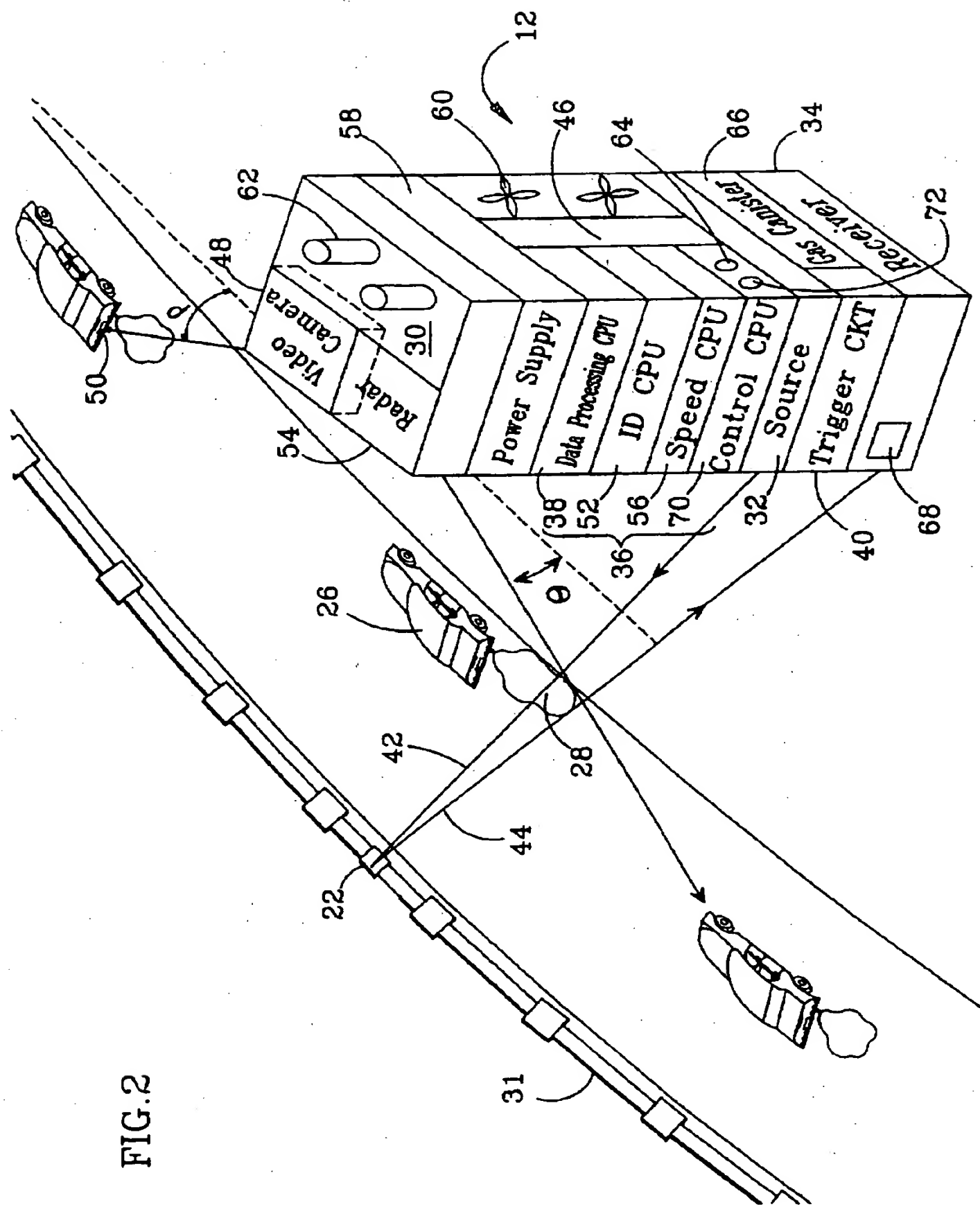


FIG. 2

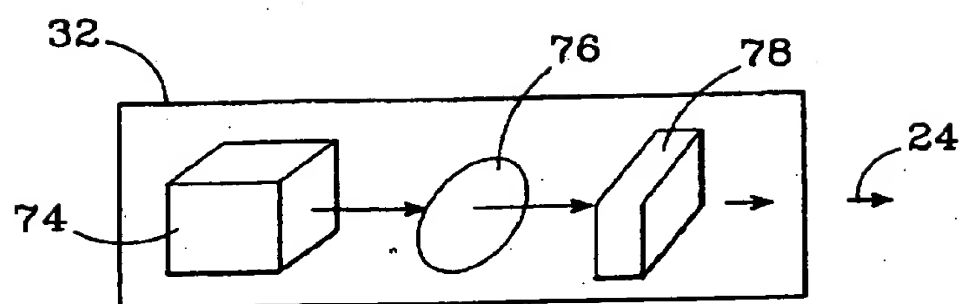


FIG. 3

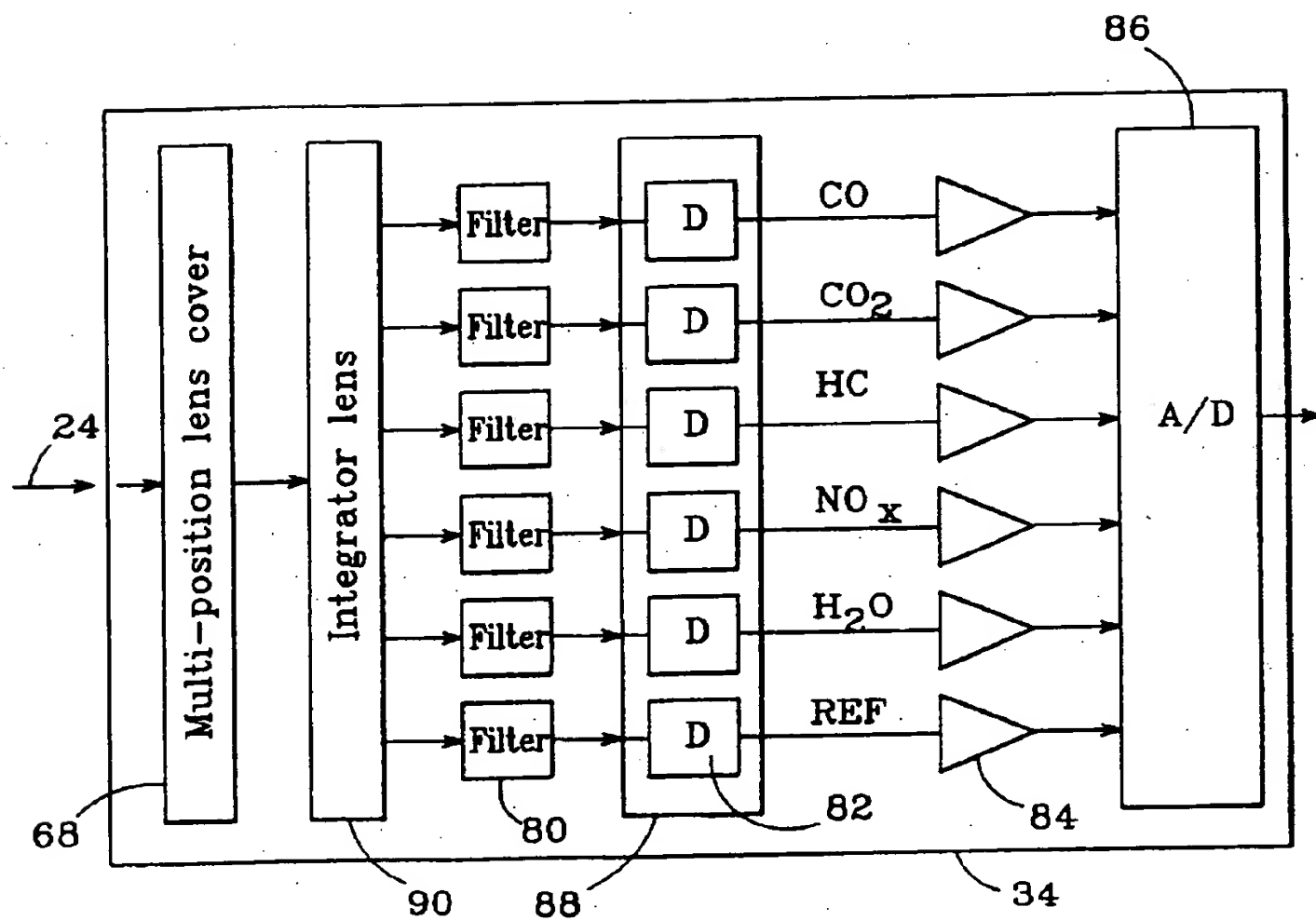
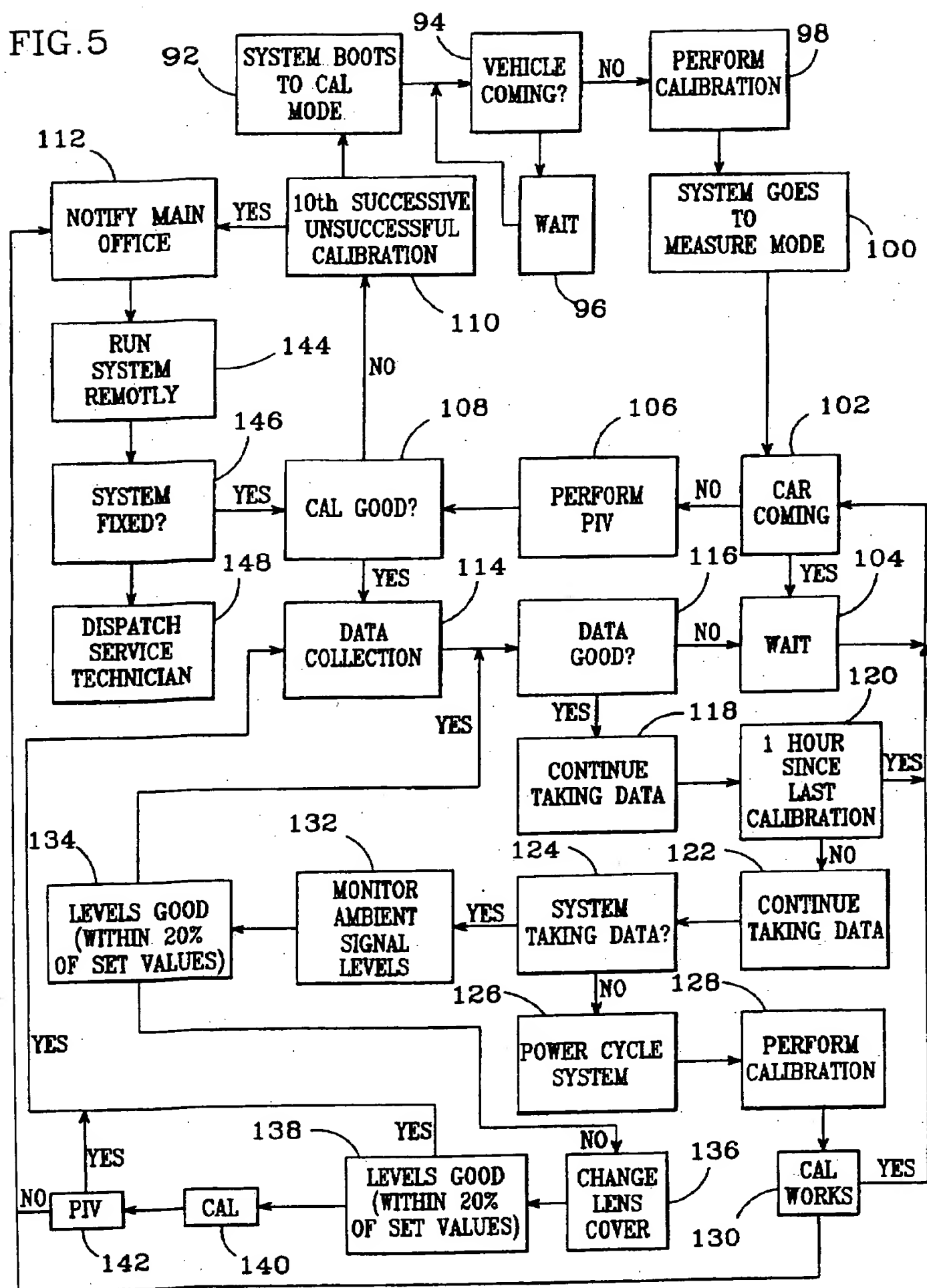


FIG. 4

FIG. 5

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graph TD
    92[SYSTEM BOOTS TO CAL MODE] --> 94{VEHICLE COMING?}
    94 -- NO --> 98[PERFORM CALIBRATION]
    94 -- YES --> 96[WAIT]
    98 --> 100[SYSTEM GOES TO MEASURE MODE]
    100 --> 102{CAR COMING}
    102 -- YES --> 104[WAIT]
    102 -- NO --> 106[PERFORM PIV]
    104 --> 110[10th SUCCESSFUL CALIBRATION]
    106 --> 108{CAL GOOD?}
    108 -- YES --> 114[DATA COLLECTION]
    108 -- NO --> 110
    114 --> 116{DATA GOOD?}
    116 -- YES --> 118[CONTINUE TAKING DATA]
    116 -- NO --> 120[WAIT]
    118 --> 122[1 HOUR SINCE LAST CALIBRATION]
    122 -- YES --> 124[SYSTEM TAKING DATA?]
    122 -- NO --> 126[CONTINUE TAKING DATA]
    124 -- YES --> 128[POWER CYCLE SYSTEM]
    124 -- NO --> 130[PERFORM CALIBRATION]
    126 --> 132[MONITOR AMBIENT SIGNAL LEVELS]
    128 --> 130
    130 --> 136{CAL WORKS}
    132 --> 134[LEVELS GOOD WITHIN 20% OF SET VALUES]
    134 -- YES --> 138[LEVELS GOOD WITHIN 20% OF SET VALUES]
    134 -- NO --> 142[PIV]
    136 -- YES --> 140[CAL]
    136 -- NO --> 138
    138 --> 140
    140 --> 144[RUN SYSTEM REMOTELY]
    144 --> 146{SYSTEM FIXED?}
    146 -- YES --> 148[DISPATCH SERVICE TECHNICIAN]
    146 -- NO --> 110
    148 --> 110
    110 --> 92
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The flowchart illustrates the calibration process for a vehicle system. It begins with the system booting into calibration mode (92). A decision is made on whether the vehicle is coming (94). If not, calibration is performed (98), and the system goes to measure mode (100). If the vehicle is coming, the system waits (96). In measure mode, a decision is made on whether a car is coming (102). If yes, the system waits (104). If no, it performs a PIV (106). A decision is made on whether the calibration is good (108). If yes, data collection begins (114). If no, it proceeds to the 10th successive unsuccessful calibration (110). Data collection leads to a decision on whether the data is good (116). If yes, it continues taking data (118). If no, it waits (120). After 1 hour since the last calibration (122), a decision is made on whether the system is taking data (124). If yes, it powers cycles the system (128). If no, it performs calibration (130). Calibration leads to a decision on whether it works (136). If yes, it proceeds to the 10th successive successful calibration (140). If no, it changes the lens cover (138) and then proceeds to the 10th successive successful calibration (140). The 10th successive successful calibration (140) leads to running the system remotely (144). A decision is made on whether the system is fixed (146). If yes, a service technician is dispatched (148). If no, it proceeds to the 10th successive unsuccessful calibration (110). The 10th successive unsuccessful calibration (110) leads back to the system booting into calibration mode (92).



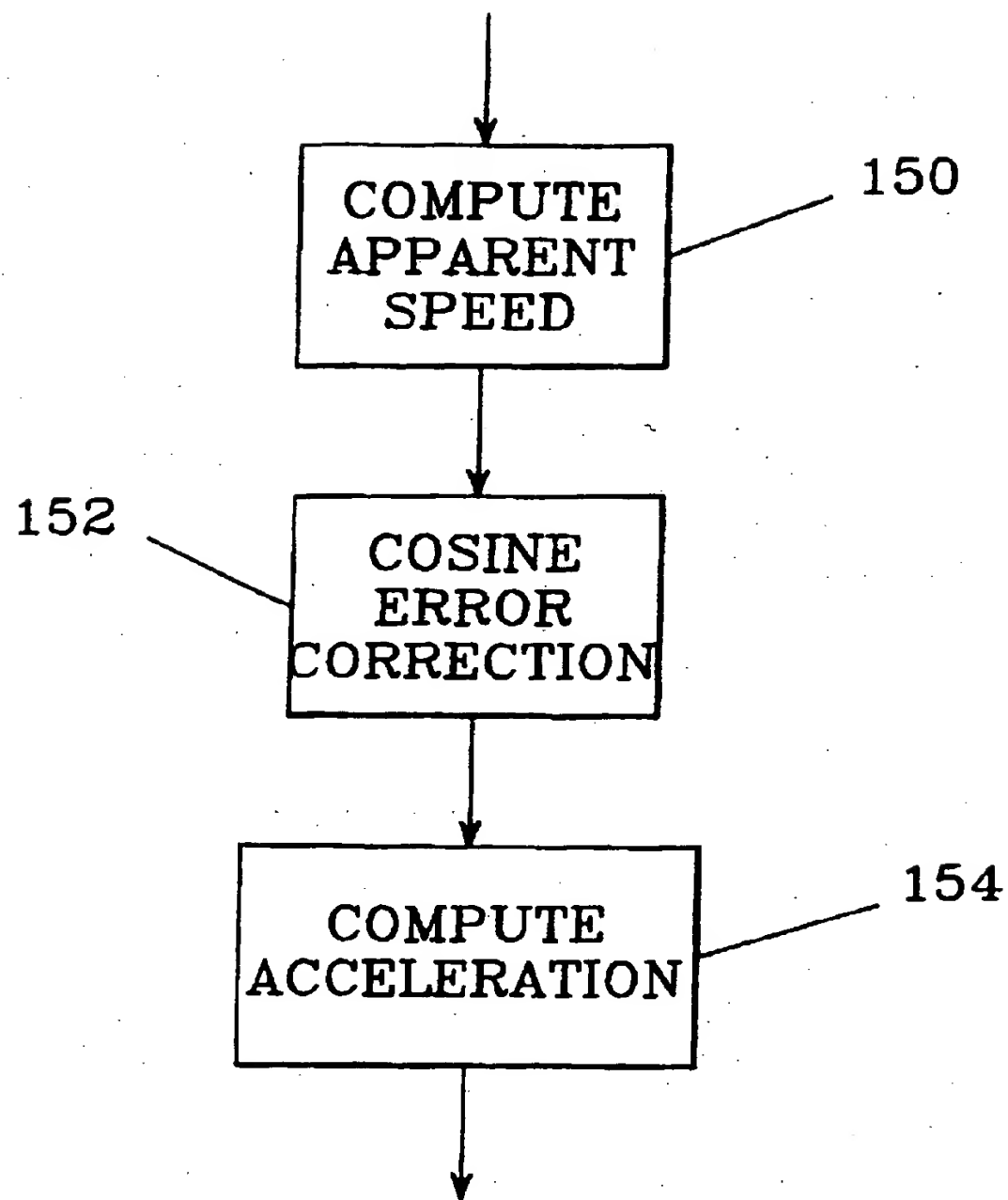


FIG.6

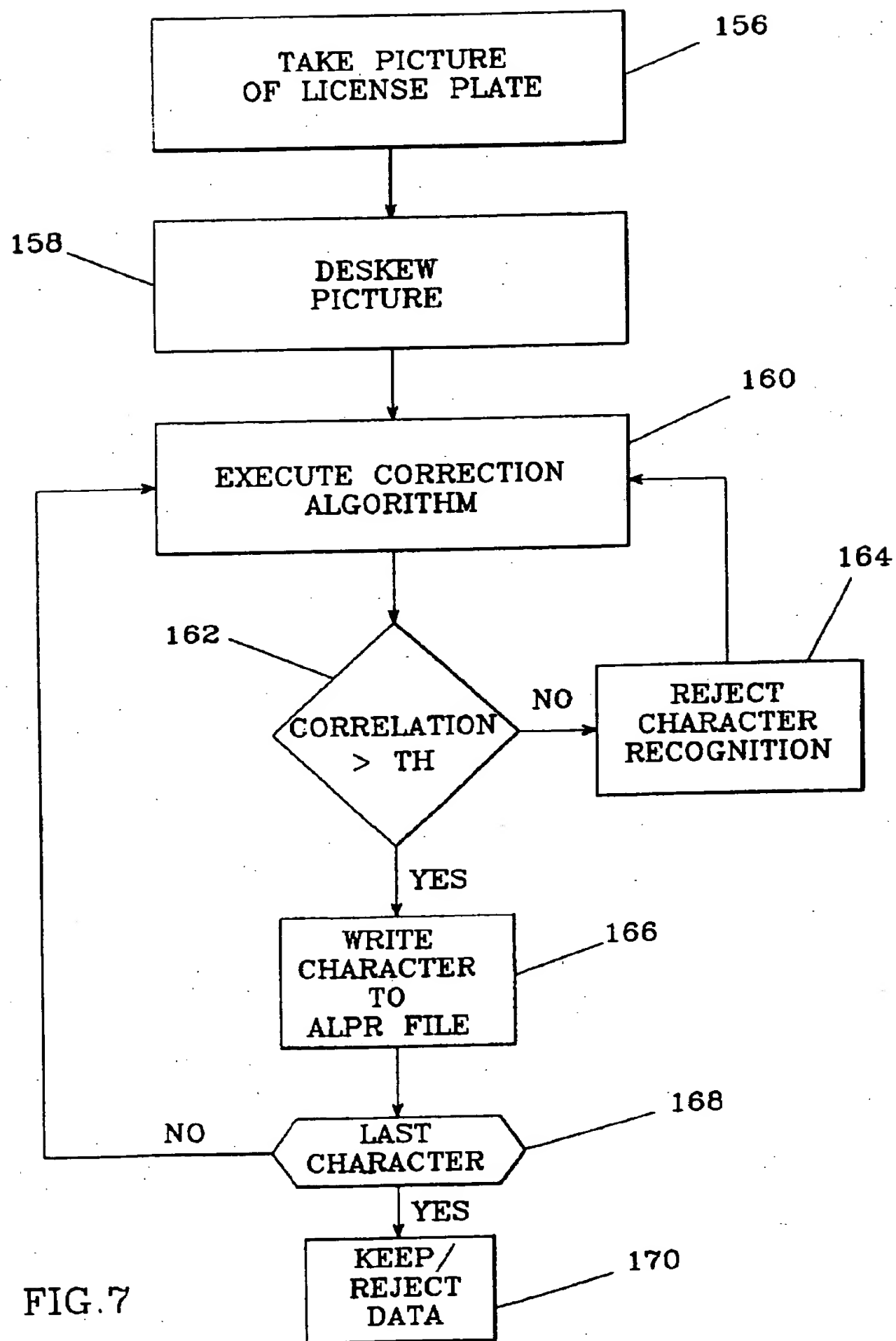


FIG.7

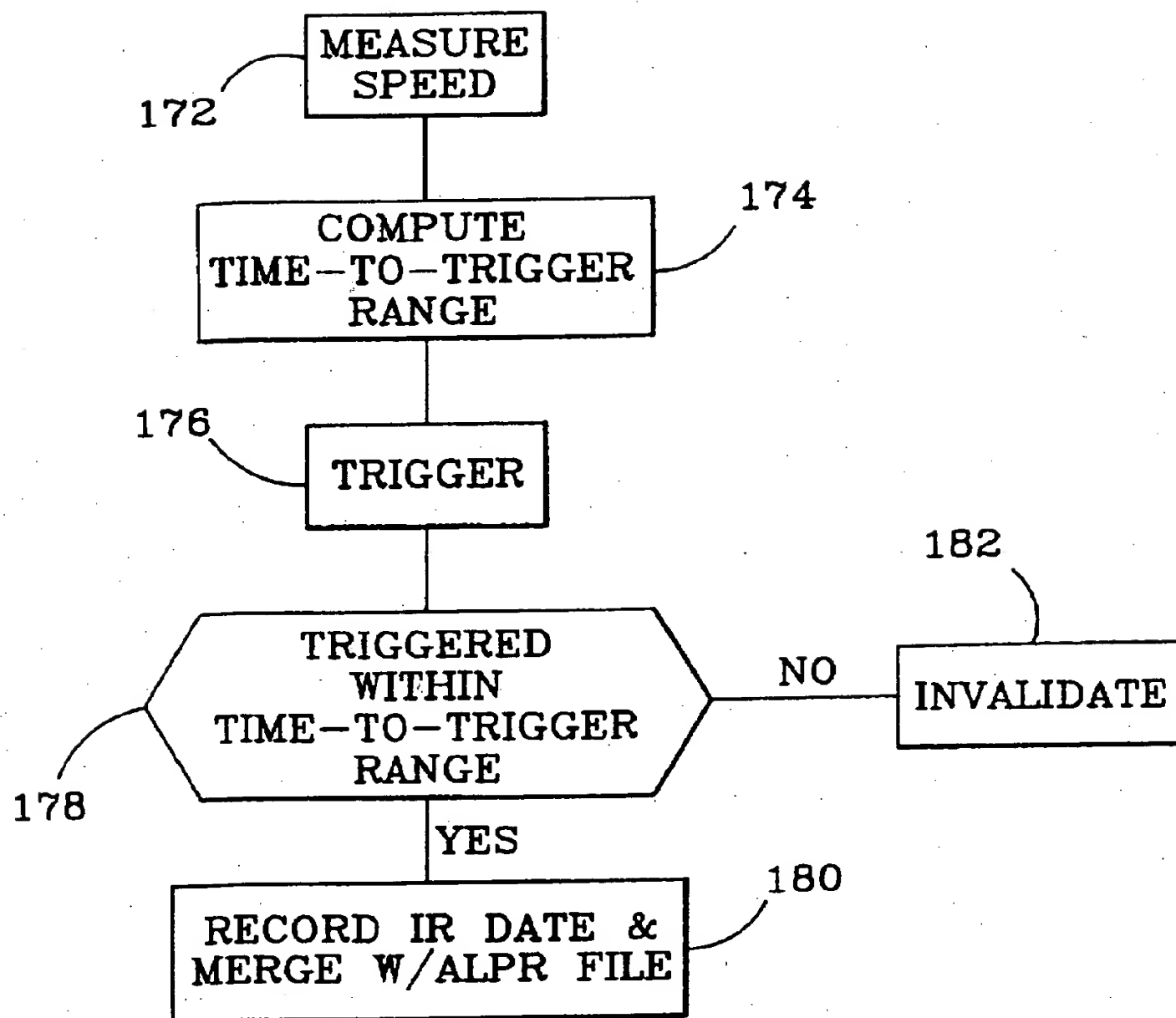


FIG.8